



**Health Services**  
LOS ANGELES COUNTY

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*To ensure access to high-quality,  
patient-centered, cost-effective  
health care to Los Angeles residents  
through direct services at DHS  
facilities and through collaboration  
with community and university  
partners.*



**www.dhs.lacounty.gov**

May 31, 2011

The Honorable Board of Supervisors  
County of Los Angeles  
383 Kenneth Hahn Hall of Administration  
500 West Temple Street  
Los Angeles, CA 90012

Dear Supervisors:

**AUTHORIZE PURCHASE OF A CENTRAL ENTERPRISE UNIFIED  
COMPUTING SYSTEM  
(ALL SUPERVISORIAL DISTRICTS)  
(3 VOTES)**

CIO RECOMMENDATION: APPROVE (x) APPROVE WITH  
MODIFICATION ( ) DISAPPROVE ( )

**SUBJECT**

Authorize an equipment purchase of a Unified Computing System for the Department of Health Services to support computing infrastructure required to migrate Health Services virtualization and records retention systems to the Martin Luther King, Jr. Multi-Service Ambulatory Care Center interim data center as previously approved by your Board.

**IT IS RECOMMENDED THAT YOUR BOARD:**

Authorize the Internal Services Department (ISD), as the County's Purchasing Agent, to proceed with the acquisition and installation of a central Unified Computing System (UCS), to include an associated Storage Area Network (SAN), for the Department of Health Services (DHS) with a total cost of \$1,942,058 because this purchase request will exceed the \$250,000 capital asset threshold established by your Board.

**PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION**

Approval of this action will enable DHS to acquire a CISCO UCS infrastructure. Your Board previously approved the construction of the Martin Luther King, Jr. Multi-Service Ambulatory Care Center (MLK MACC) interim data center as a means to meet DHS' needs. The objective of this purchase is to provide the required computing infrastructure for the interim MLK MACC data center in preparation of

the DHS Health Services Administration (HSA) Information Technology (IT) systems migration. This purchase will further optimize and replace end-of-life "stand-alone" servers and data storage facilities; and complies with the County's virtualization initiatives. The UCS/Unified Computing Fabric architecture integrates computing, networking, and storage resources to increase efficiency and enables centralized management of data center systems and services. This technology will prepare the MLK MACC data center for occupation and complement the new center's infrastructure and operational methodology.

This purchase optimizes and facilitates the entire IT computing foundational infrastructure associated with the new interim MLK MACC data center and leverages the purchase of all major infrastructure components and disciplines required to support data center operations.

The UCS infrastructure will support IT mission critical virtualization of consolidated clinical and business enterprise systems. The equipment also will enable DHS to maintain Health Insurance Portability and Accountability Act (HIPAA) requirements associated with patient and clinical records retention supporting all DHS business and hospital IT operations. This acquisition is vital toward maintaining the integrity of the DHS Central Data Center environment systems and services. The UCS will be used by enterprise and business clinical applications supporting operations for DHS hospitals. Additional County clinical services (Virtualized Applications, Operating Room Scheduling Office System (ORSOS) and Patient Referral Systems (PRS) processing) continue to drive increased requirements for additional resource capacity. Such services include:

ORSOS	Virtual Technologies
PRS	Vision Share (Medicare Billing)
EDR (Electronic Data Repository) /	
Data Analytics	

The consolidation of multiple virtual and physical environments, as stated above, will yield additional economies of scale savings inherent of resource sharing; virtualization technology enables the reduction of physical server operations by a ratio of 15-to-1 (consolidates 15 physical machines into 1). Furthermore, through the reduction of servers, the new interim MLK MACC data center will maximize environmental infrastructure (power & cooling). This equipment supports green operational practices by reducing the DHS carbon footprint.

### **Implementation of Strategic Plan Goals**

The recommended action supports Goal 4, Health and Mental Health, of the County's Strategic Plan.

### **FISCAL IMPACT/FINANCING**

The total aggregate cost for the UCS equipment components and a three year equipment maintenance agreement is \$1,942,058.

Funding is included in HSA's Fiscal Year 2010-11 Final Budget.

### **FACTS AND PROVISIONS/LEGAL REQUIREMENT**

On October 16, 2001, your Board approved the classification categories for fixed assets and new requirements for major fixed asset (now referred to as capital asset) acquisitions requiring County departments to obtain Board approval to purchase or finance equipment with a unit cost of \$250,000, or greater, prior to submitting their request to ISD. Clinical and business records must be retained for seven years to ensure compliance with DHS Policy 881, Retention of Medical Records and X-Ray Films, and other mandated governmental, and HIPAA regulations. The UCS infrastructure will support continued compliance of these mandates.

The UCS computing infrastructure provides the required computing infrastructure (hardware, software, network, and integrated media storage) necessary to initiate operations at the new MLK MACC data center. This equipment is directly associated with Capital Project 88950 for the Data Center Move Management project at Martin Luther King, Jr. Medical Campus with a project budget of \$5,500,000; this project was approved by your Board on July 16, 2010.

The County's Chief Information Officer recommends approval of this request (see attached analysis).

### **CONTRACTING PROCESS**

This is a commodity purchase under the statutory authority of the County Purchasing Agent. The purchase will be requisitioned through, and accomplished by the Purchasing Agent in accordance with the County's purchasing policies and procedures, established by ISD.

**IMPACT ON CURRENT SERVICES (OR PROJECTS)**

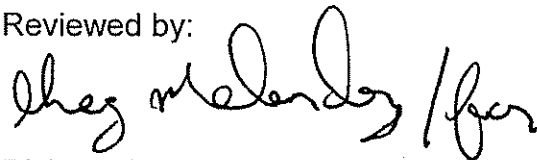
The UCS equipment provides the necessary computing infrastructure and prepares the new MLK MACC data center for occupation. If not purchased and installed, DHS/HSA will be unable to migrate critical systems to the new MLK MACC data center. The existing HSA data center, located at 313 Figueroa Street, will risk exceeding the infrastructure's (power & cooling) operational capacity limits resulting in potential fire and life safety concerns as referenced within Capital Project 88950 for the Data Center Move Management project at the Martin Luther King, Jr. Medical Campus; previously approved by your Board. The resulting impact will severely compromise DHS' ability to maintain government-mandated HIPAA requirements. Furthermore, critical strategic virtualization of critical applications schedules will be negatively impacted due to lack of computing, network, and storage infrastructure resources. The current virtualization and storage equipment is allocated at 75 percent of capacity; it is anticipated that the current capacity will be reached within six months and hospital facilities will no longer be able to maintain enterprise operations and HIPAA data retention requirements in support of ongoing patient treatment.

Respectfully submitted,



Mitchell H. Katz, M.D.  
Director

Reviewed by:



Richard Sanchez  
Chief Information Officer

Enclosures (2)

MHK:sm

c: Chief Executive Office  
County Counsel  
Executive Office, Board of Supervisors  
Internal Services Department

(Enterprise UCS Board Letter)

# CIO ANALYSIS

## AUTHORIZE PURCHASE OF A CENTRAL ENTERPRISE UNIFIED COMPUTING SYSTEM FOR DEPARTEMENT OF HEALTH SERVICES

CIO RECOMMENDATION: ☒ APPROVE ☐ APPROVE WITH MODIFICATION  
☐ DISAPPROVE

**Contract Type:**

☒ New Contract ☐ Contract Amendment ☐ Contract Extension  
☐ Sole Source Contract ☒ Hardware Acquisition ☐ Other

New/Revised Contract Term: Base Term: 1 Yrs

# of Option Yrs 3  
maintenance and support

**Contract Components:**

☒ Software ☒ Hardware ☐ Telecommunications  
☐ Professional Services

Project Executive Sponsor: Mitchell H. Katz, M.D.

**Budget Information :**

Y-T-D Contract Expenditures	\$0
Requested Contract Amount	\$1,942,058.00
Aggregate Contract Amount	\$1,942,058.00

**Project Background:**

Yes	No	Question
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is this project legislatively mandated?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is this project subvented? If yes, what percentage is offset?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is this project/application applicable to (shared use or interfaced) other departments? If yes, name the other department(s) involved. The requested equipment will not be shared, but Department of Mental Health (DMH) is collating at the Martin Luther King Data Center.

**Strategic Alignment:**

Yes	No	Question
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is this project in alignment with the County of Los Angeles Strategic Plan?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is this project consistent with the currently approved Department Business Automation Plan?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Does the project's technology solution comply with County of Los Angeles IT Directions document?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Does the project technology solution comply with preferred County of Los Angeles IT standards?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	This contract and/or project and its milestone deliverables must be entered into the Information Technology Tracking System (ITTS).

### **Project/Contract Description:**

Department of Health Services (DHS) is requesting Board authorization to purchase Cisco Unified Computing System (UCS) infrastructure for the Martin Luther King, Jr. Multi-Service Ambulatory Care Center (MLK MACC) data center. This purchase includes hardware, software, installation, and maintenance support services (1 year warranty with 3 year extended service agreement). This infrastructure will support the migration and consolidation of systems hosted DHS' 313 Figueroa and 555 Ferguson data centers, and support systems required by MLK MACC. The building of the MLK MACC data center was previously approved by your Board (Capital Project 88950).

### **Background:**

On July 16, 2010, the Board approved Capital Project 88950 Data Center Move Management project at the MLK MACC to meet DHS' requirements for suitable data center space to support mission critical business and critical systems. Cisco UCS provides the necessary computing infrastructure to prepare the data center for occupancy and to migrate and consolidate DHS's clinical and business applications.

### **Project Justification/Benefits:**

UCS is a data center platform that integrates computing, networking, and storage resources to increase efficiency and simplify management of data center operations. It allows DHS to substantially reduce the number of devices that must be purchased, cabled, configured, powered, cooled, and secured in the data center.

Authorization of this purchase, will allow DHS to:

- Migrate critical patient care and health care systems at existing DHS centers to the new more reliable and efficient MLK MACC data center;
- Continue virtualization efforts and resulting reduction of physical servers at DHS facilities;
- Implement a virtual desktop proof of concept to evaluate the feasibility of implementing thin client technology; and
- Support the continued growth of DHS systems and applications.

### **Project Metrics:**

A detailed Scope of Work and project schedule is being prepared to address specific work required to implement the UCS infrastructure equipment. The project will be managed by DHS staff and certified professional consulting service staff. Project progress will be reviewed on a regular basis and status will be shared with the County CIO.

### **Impact on Service Delivery or Department Operations, if Proposal is Not Approved:**

If the purchase is not approved and equipment is not installed, it will negatively impact the support for MLK MACC systems and prevent migration of DHS mission critical enterprise systems to the new data center. The DHS data center at 313 Figueroa Street will be at risk of exceeding its power and cooling capacity and may potentially result in fire and life safety concerns. Moreover, it will impact DHS' ability to comply with HIPAA requirements. Furthermore, strategic virtualization of critical applications will be negatively impacted due to lack of computing, network, and storage infrastructure resources.

### **Alternatives Considered:**

DHS evaluated an alternative configuration and equipment approach, but this entailed purchasing individual servers, network distribution (cabling, switches, patch-bays, racks, etc.), and SAN storage arrays. It was determined that this duplication of system components (primarily network) would require additional maintenance and staff resources to manage. The UCS represents an economies of scale computing model with integrated network infrastructure and enables scalable growth.

### **Project Risks:**

A key risk is aligning the UCS procurement schedule to align with MLK construction activities. The MLK MACC data center is scheduled to begin migration activities on December 15, 2011. This UCS equipment must be installed and tested prior to DHS migration of systems and services. The Chief Information Security Officer (CISO) has reviewed the purchase and did not identify any security risks or issues.

### **Risk Mitigation Measures:**

A detailed project plan has been developed concerning the installation and migration efforts to mitigate scheduling risks associated with the project. Other hardware (i.e. racks, power, etc.) are being provided through the data center construction project. Detailed network and system architecture planning has been in progress for months. This contract includes professional "rack & stack," as well as system configuration and commissioning services to ensure a timely and effective installation and migration.

### **Financial Analysis:**

The total cost for the UCS equipment components and a three-year equipment maintenance agreement is \$1,942,058. DHS represents funding is included in the HSA FY 2010-11 Final Budget.

**CIO Concerns:**

None.

**CIO Recommendations:**

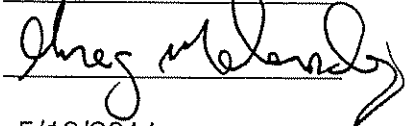
The CIO recommends approval of Board authorization of this purchase.

**CIO APPROVAL**

Date Received: 4/28/2011

Prepared by: Sanmay  
Mukhopadhyay

Date: 5/4/2011

Approved: 

Date: 5/19/2011